California Redwood

A Construction Digest of Information on the Values and Uses of Redwood and its Adaptation to Current Design and Practice in Residential and Industrial Buildings

1923 Edition

CHICAGO
2060 McCormick Bldg.

NEW YORK CITY
1527 Pershing Square Bldg.

THE PACIFIC LUMBER CO. of Illinois

SAN FRANCISCO
311 California St.

LOS ANGELES
Central Bldg.

THE PACIFIC LUMBER CO.

The Pacific Lumber Co.
Redwood

The Largest Manufacturers and Distributors of California Redwood

THE PACIFIC LUMBER COMPANY

OF ILLINOIS

Midwestern and Eastern Distributors of California Redwood

McCormick Building
CHICAGO, ILL.

Pershing Square Building
NEW YORK, N. Y.

THE PACIFIC LUMBER COMPANY

Manufacturers and Pacific Coast Distributors

MILLS: SCOTIA, HUMBOLDT COUNTY, CALIFORNIA

OFFICES:
311 California Street, SAN FRANCISCO, CAL., and Central Building, Sixth and Main Streets, LOS ANGELES, CAL.

Products.

REDWOOD LUMBER, a non-resinous soft wood permeated during growth with an odorless *natural* preservative.

REDWOOD MILLWORK.

Uses for Redwood.

Redwood is a superior wood for exterior finish (siding, cornice, window and door frames, porches, columns, doors, sash, etc.) for shingles and shakes on roofs and sides of buildings; for sleeping porches, pergolas, summer houses, flower boxes and vases; for greenhouse construction; for interior finish wherever great beauty of grain, freedom from knots or blemishes, and immunity from shrinkage or warping is desired in a finish wood; wherever wide paneling from one piece is required; for special farm uses—such as silo construction—and for hot-bed sash, beehives and incubators; for tanks, pipes, flumes, culverts, and cesspools.

These subjects are treated more fully in pages indicated.

Redwood is a soft wood of a character highly valuable for construction purposes because it is unusually resistant to decay, rot and fire, and because of its insulating qualities. Until recent years little was known of the extraordinary values of Redwood as a specialty wood, but as Redwood is becoming better understood by industry its users are increasing continually. Moreover, production and transportation facilities are now available to supply the large demands of the future.

COLOR—The heart wood ranges from light cherry color to mahogany, generally an old rose color. The sap wood (of which there is very little) is a cream color.

RESISTANCE TO DECAY—A *natural* preservative which permeates Redwood accounts alike for the great age of the timber (Redwood trees are the oldest living things) and for the lumber's remarkable resistance to decay. A Redwood log buried in the ground for 600 years was found to be still sound and was cut into first class lumber.

It is unnecessary to treat Redwood with artificial preservatives.

RESISTANCE TO FIRE—Being free of pitch or other resinous substances, Redwood is slow to ignite, and its resistance to fire, as demonstrated in the San Francisco conflagration of 1906 and in many other fires, adapts it to many commercial purposes.

NON-CONDUCTIVITY—The large number of minute air cells, regularly spaced and of uniform shape, make Redwood highly non-conductive to heat or cold, and when properly dried keep it from expanding or contracting in use.

The cells in properly dried Redwood are dead air spaces, unclogged by resinous deposits found in most woods.

TEXTURE—Soft, yet firm, of close, even grain, and unusually free from knots or defects.

WEIGHT—Light, compared with other "soft woods."

SPECIAL QUALITIES—Preponderance of heartwood. Wide boards. Close, even grain. Lightness of weight. Absence of pitch and resin. Presence of *natural* preservative that permeates the wood. Fire resistant. Non-conductivity of heat or cold. Freedom from insect or worm activities. Non-shrinking. Non-swelling. Non-coloring. Acid and alkali resistance. Odorless and tasteless.

These properties of rot and fire resistance, minimum warp and shrinkage, as well as lack of odor, and its close grain and easy woodworking texture, have created a wide demand for Redwood for both residential and industrial building purposes.

Growth.

Redwood grows principally in the northern counties of California, on the Pacific slopes of the Coast Range. It is from this section that Redwood for com-

mercial purposes is obtained. The Redwood used for commercial lumber is not the Sequoia Gigantea—the famous "Big Trees" in the National Parks of the Sierra Nevadas—but is a different species, the Sequoia Sempervirons (Everliving). The trees are extremely large and attain great heights, varying from 150 to 350 ft. in height, and from 3 to 15 and sometimes 20 ft. in diameter. Growing very slowly, in a moist climate, they are known to have obtained ages up to from 2000 to 3000 years. The character, size, age and climatic conditions of Redwood growth are no doubt factors in its utilitarian advantages.

CONSERVATION—Conservation is intelligent use. We are operating on that principle, not only in logging, where waste is reduced to the minimum, but in manufacturing, where, due to the completeness of our facilities and the demand for Redwood for such a wide range of uses, we are able to cut up and refine our lumber so as to utilize every part of the log, both high and low grades—even the sawdust and bark. This makes not only for conservation of timber but for service and economy to our patrons. This conservation and the ownership of so many thousands of acres of uncut timber, close by the mills, assure a plentiful supply of Redwood for many years to come.

Supply.

The supply of California Redwood is ample for all the special uses for which this especially rich and flexible medium is best adapted. For although this timber grows only in California, and in California only within a narrow strip along the Pacific Coast, that strip contains thousands of square miles of territory, and supports, it is estimated, 70 billion feet of standing Redwood timber.

Mills, Facilities and Capacity.

THE PACIFIC LUMBER COMPANY is the largest manufacturer and distributor of Redwood lumber. Our annual production capacity is now over 125,000,000 ft. of Redwood.

Owning many thousands of acres of the finest Redwood timber lands in Humboldt County, California, together with two large sawmills and planing mills, located in Scotia, California, THE PACIFIC LUMBER COMPANY further enhances its production facilities by owning all the commercial, housing and recreational buildings in the town of Scotia, in which the employees live.

It has exclusive use of the Leaver drying kilns, invented and constructed by an officer of the company to assist nature in drying Redwood for industrial use, at the same time not disturbing the natural preservative that permeates Redwood.

In logging operations, sawmills, planing mills, storage yard and shipping plants, every modern mechanical device is employed.

Stocks and Shipments.

Sawed and seasoned Redwood lumber of all sizes, together with a large variety of milled products, are continually carried in stock at the mills at Scotia—usually this stock approximates 75,000,000 ft. Production and shipping are facilitated by an electric overhead monorail system, which operates throughout the mills, yards and shipping houses.

Direct rail shipments to the Middle West and East are now made via the Northwestern Pacific Railroad, whose tracks adjoin the mills.

A large stock of Redwood is also carried at our "quick shipment" depot, in Chicago, to supply Middle West and Eastern demands where time is a factor. Shipments can be made from Chicago, either in carload or less than carload lots.

Trade-mark.

Wherever practicable, the registered trade-mark shown here is placed upon Redwood from THE PACIFIC LUMBER COMPANY, a mark to indicate to the trade and user that the product is the result of every refinement in the production of Redwood. In the cases where shipping tags are used, the trade-mark label is on the tags.

All Redwood siding is plainly marked with our trade-mark, surface measure, grade and size.

Door and window frames are stamped with trade-mark.

Moulding packages are marked with trade-mark, total number of pieces, lineal measurements and pattern.

Shingles in packages are marked with trade-mark and number of shingles.

As fast as possible, arrangements are being made to further protect buyers by extending our trade-mark to other forms and sizes of Redwood.

Sales Offices.

All sales in the territory east of the Rockies are made by THE PACIFIC LUMBER COMPANY of Illinois, whose general offices are in the McCormick Building, 332 South Michigan Avenue, Chicago.

The Eastern territory is handled through the New York office, in the Pershing Square Building, Park Avenue and Forty-second Street.

Sales in Pacific Coast territory are made from THE PACIFIC LUMBER CO.'s San Francisco office, 311 California Street. A branch sales office is located in the Central Building, 6th and Main Streets, Los Angeles.

Painting and Staining.

It is not necessary to paint or stain Redwood in order to make it durable; but those who prefer a painted or stained effect will find that Redwood will take any finish that any other wood will take, and some that no other wood will take. It takes stain readily, and the stain penetrates so thoroughly that any damage to the surface does not show because the pinkish color of the natural wood does not show through the stain.

Redwood is especially well suited to all kinds of paint and enamel work, because of its fine grain, smooth surface and the absence of resin or pitch. High class jobs of white enamel on Redwood, with hand rubbed finish, have lasted as long as 20 years in recorded cases without repainting. The freedom of Redwood from shrinking and swelling tends to insure against unsightly cracks in enamel work.

Cost.

Many people think that Redwood must necessarily be a high priced wood, on account of its being found only in California; but this is not the case. Because Redwood is lighter than other woods, when dry, the item of freight is consequently reduced.

Redwood sells at a price that, in spite of the high production and shipping costs, compares favorably with the cost of other woods which have been used for similar purposes, for most of which uses Redwood's unusual adaptability and lengthened service tends to further reduce the actual costs of material.

Redwood Lumber Specifications.

(1) All worked lumber shall be measured and invoiced for contents before working.

(2) All rough lumber unseasoned shall allow an occasional variation equivalent to 1/16 in. in thickness per inch and 1/32 in. in width per inch.

(3) All rough lumber seasoned shall allow a variation equivalent to 3/32 in. in thickness.

(4) All rough lumber seasoned shall allow a variation in width as follows:

6 in. and less, ¼ in. in width; 8, 10 and 12 in., ½ in. in width; 14 in. and wider, ¾ in. in width.

(5) Surfaced lumber will be less than rough size as follows:

1, 1¼ and 1½ in. S1S or S2S, 3/16 in. off thickness.
2 and 3 in. S1S or S2S, ¼ in. off thickness.
Widths, 3 to 6 in. S1E, ¼ in. off widths.
Widths, 8 to 12 in. S1E, ½ in. off width.
Widths, 3 to 12 in. S2E, ½ in. off width.
4x4, 4x6, 5x5 and 6x6 S1S, S2S, S3S or S4S, ¼ in. off each face.

Rustic, T & G., T. G. & B. will be 3/16 in. less for one side and ¼ in. less for two sides. (Above less than rough thickness.)

(6) When lumber less than 1 in. in thickness is ordered, it will be understood, unless otherwise specified, that the quantity named is surface measure.

(7) Grain of all grades shall be as the lumber runs.

(8) Vertical grain Redwood—the angle of grain shall be not more than 45° from vertical showing on 70% or more of the face.

(9) Worked lumber to be in accordance with patterns adopted by the Redwood lumber manufacturers and copyrighted by the California Redwood Association, June, 1918.

KNOTS—In these Grading Rules, knots are classified as sound, loose and soft.

A Sound Knot—Irrespective of color, is solid across its face, as hard or harder than the wood it is in, and so fixed by growth or position that it will retain its place in the piece.

A Loose Knot—Is one not held firmly in place by growth or position.

A Soft Knot—Is one not so hard as the wood itself.

Grades of Redwood.

UPPERS—(Under the heading of Uppers shall be included Clear, Sap Clear, Select or "A" and Standard or "B".)

Clear—Shall be good and sound, free from knots, shakes or splits, except a fair proportion in each shipment may contain pin knots showing on one face only. Will allow a reasonable amount of birdseye, and sap not exceeding 4% of the area of all the surfaces.

Sap Clear—Shall conform generally to the grade of clear, except that it may contain any amount of sap. Discolored sap, when sound, shall not be considered a defect.

Select or "A"—Shall be good and sound, free from shakes or splits. Shall be graded from the face side and will allow birdseye and 1 small, sound knot 1 in. in diameter or its equivalent in each 6 superficial ft. In the absence of other defects, will allow 1 soft knot ½ in. in diameter in each 6 superficial ft. Sap allowed not exceeding 4% of the area of all surfaces.

Standard or "B"—Shall be graded from the face side and will allow birdseye, any amount of sap, and in each 6 superficial ft., 2 sound knots not exceeding 1¼ in. in diameter, or their equivalent. In the absence of sound knots, will allow one soft knot 1 in. in diameter or its equivalent in each 6 superficial ft.

WORKED UPPERS—*Clear, Sap Clear and Select Worked*—Shall be well manufactured and worked smoothly to uniform thickness. Will admit of slight roughness or variation in milling, and defects mentioned under grades of Clear, Sap Clear and Select.

Standard Worked—Will admit in addition to stock of regular Standard Grade, Clear, Sap Clear and Select or "A" which, owing to poor machining, is unsuitable for these grades.

Shop Lumber—This is strictly a cutting-up grade, and will be graded to produce 50% to 70% Sap (A) and Better cuttings, 5 in. and wider and 3 ft. and longer. Will allow sap, loose or rotten knots, or other defects, but must contain percentage of "A" and Better cuttings as above described.

Architectural Specifications for the use of Redwood.

GENERAL—All lumber used, whether for rough or finished woodwork, unless otherwise specified, shall be thoroughly seasoned California Redwood, and shall be of the first quality of the respective grades, and guaranteed against any objectionable shrinkage or other imperfections not permitted by the California Redwood Association.

NOTE.—Redwood should be specified for:

All exterior trim	Lattice
Balusters	Moulding
Ceiling	Mud sills
Columns	Newels
Door, window and cellar frames	Pickets
Eaves	Porch flooring
Fencing	Porch rail
Greenhouses	Shingles
Gutters	Roofing (shingles and shakes)
Lath	Septic tanks
Interior finish	Siding

LATHING—All partitions, walls, and elsewhere as indicated or shown on drawings shall be lathed with No. 1 California Redwood laths, ⅜ in. by 1½ in. by 4 ft., free from bark or dead knots, and of full thickness. They are to be laid ⅜ in. apart on ceilings and soffits, and ¼ in. apart on walls and partitions, with four nailings to a lath and joints broken every 18 in. Set all laths horizontally and leave no long, straight, vertical joints; laths shall not be put on vertically in any instance.

PORCH FLOORING—Lay the porch floor with Clear Grade California Redwood flooring, tightly strained and blind nailed to every bearing with two 8d nails, the joints run in white lead. Finish the edge of the floor with floor mould as detailed.

SHINGLES—Cover all roofs, dormers, gables, so marked on drawings, with a layer of waterproof paper and (Clear or *A*) California Redwood Shingles, laid ..... in. to the weather, and laid with two zinc-coated iron nails to each shingle.

Note—If shingles are to be dipped, so specify here.

SHAKES—Cover all roofs, walls, gables. dormers, etc., so shown on drawings, with a layer of waterproof paper, and (split or sawn) (Clear Vertical Grain or Clear XX) California Redwood shakes, laid 16 in. to the weather.

SIDING—All walls or portions of walls so shown on drawings, shall be covered with (Clear or "A" or Select, or "B" or Standard, as desired) California Redwood (lap siding or drop or novelty siding as per details), size ....., laid .... in. to the weather, well nailed, over every bearing with zinc coated cut iron nails, set for puttying. No butt joints will be allowed in panels 12 in. long or under, and no butt joints are to come over window or door openings in the first course above such opening.

EXTERIOR TRIM—All exterior trim, except as otherwise noted, shall be of Clear California Redwood, thoroughly seasoned and in strict accordance with the scale and detail drawings. All finished work shall be primed by painter before erection.

Note—"A" or Select or "B" or Standard Grade may be used for trim that is not to be painted.

All box gutters shall be lined with 13/16-in. California Redwood, Clear Grade.

All sash, window and door frames shall be of (Grade "A" or Select and Better) California Redwood.

COLUMNS—All exterior columns shall be of (Grade "A" or Select and Better) California Redwood, built up of staves, thoroughly seasoned and made in strict accordance with the detail drawings.

INTERIOR FINISH—All stock used for interior finish woodwork, unless otherwise shown on drawings or specified shall be Clear Grade California Redwood. All shall be hand planed, scraped and sandpapered and all tool marks, stains and defacements removed. All mouldings shall be carefully worked out and run true and straight. All work shall be delivered to painter clear and in perfect condition, ready for finishing.

Note—If to be painted, trim may be specified Grade "A" or Select, or "B" or Standard.

RESIDENCE, DES MOINES, IOWA
8-in. Redwood Bungalow siding painted white

RESIDENCE, PLAINFIELD, N. J.
Redwood siding painted white

Essential Qualities of an Ideal Lumber for Residential Construction.

The permanent beauty of any wooden house depends primarily on the lumber used. If it is hard in some spots, and soft and spongy in others, if it "bleeds" pitch here and there, it is almost impossible to give it a painted surface that will look well—and stay looking well. In a short time it gets "spotty." Where it gets "spotty" there is shrinking, swelling and warping. Decay begins.

In a few years repairs become necessary. The value of the house shrinks as the soundness of its sidings, porch posts and columns, railings, gutters, window frames, eaves, roof, water tables and other parts, constantly exposed to climatic changes and moisture, gradually deteriorate.

Architects full appreciate the necessity for a careful selection of kinds and grades of wood to be used. No wood meets all requirements for all purposes. Hard wood is best for some uses, soft wood for others. For exteriors, paint holding qualities and resistance to rot are extremely important.

Redwood possesses both these qualities to a remarkable degree. Every fiber is impregnated with *natural* preservative which guards it against rot and decay. It has a uniform cellular structure which provides paint tenacious surfaces. It is free from pitch and other resinous substances. Redwood is also remarkably free from knots, splits, worm holes and other defects. It is close grained and of uniform texture.

Properly dried, Redwood resists the action of the elements longer—painted, stained or unfinished—than most woods generally used in building construction. It is practically free from warping and twisting.

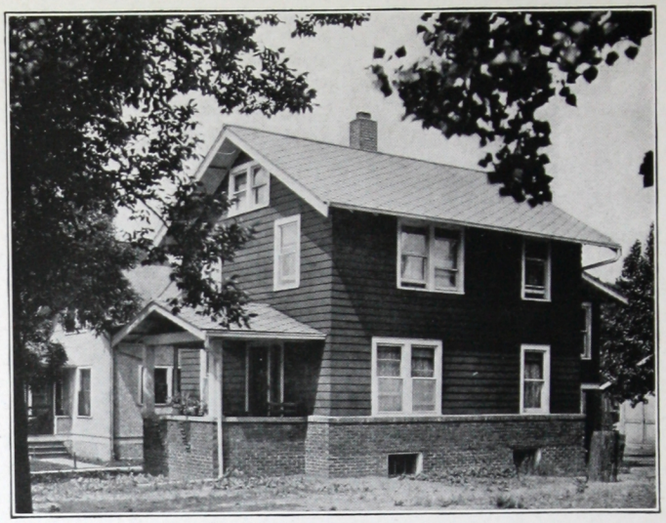
Redwood for Siding.

The sidewalls of a house are as important as the roof or the foundation—they should be absolutely weatherproof, leakproof, and impervious to dampness; they should last without expense, without paint if necessary, and should not crack, scale or rot, at the same time being capable of attractive treatment from an architectural viewpoint.

RESIDENCE, MISSION HILLS, COUNTRY CLUB DISTRICT, KANSAS CITY, MO.
Redwood siding painted white

RESIDENCE, PLAINFIELD, N. J.
Redwood siding painted white

RESIDENCE, DES MOINES, IOWA
8-in. Redwood Bungalow siding painted white



RESIDENCE, DES MOINES, IOWA
8-in. Redwood Bungalow siding, natural finish

Redwood bevel siding, bungalow siding and drop siding are fast coming into popular favor in the East. In the West they have been used for many years in all sections of that country.

Redwood siding, or a shingle or shake siding, is a covering that gives artistic beauty as well as longer service. It can be stained or painted to any color, and adds to the value of the property because the exterior of the house looks just as uniformly attractive and is still as perfectly weatherproof 25 years after as it was the day it was built.

Redwood Shingles and Shakes.

Redwood shingles or shakes as a roof or sidewall covering give long life and fire protection.

No other shingle, or substitute roof covering gives the ideal combination of rot resistance and fire retardance, with the additional merit of being rustproof and free from tar, gum or any other substance to melt in the sun and fill gutters, water pipes or drains.

All Redwood shingles and shakes are free from sap. It is the sap of any wood that rots first, and an all-heart Redwood shingle will give satisfactory service for half a century or more without paint or stain of any kind, provided only that the proper kind of shingle nail is used. This point can not be emphasized too strongly.

Both shingles and shakes are used extensively for sidewalls because of the artistic effects produced, as well as being a splendid weatherproof covering.

Redwood shingles come in two grades, No. 1 Clear and *A*. The former is a carefully selected vertical grain shingle, free from all defects, and is used invariably on coverings where service demands first consideration. The latter is a 10-in. clear butt shingle, "slash" grain being no defect, and it is recommended for sidewalls rather than for roofing.

Always lay Redwood shingles or shakes with zinc coated cut iron nails. This will prolong the life of the roof many years. The ordinary steel shingle nail will rust out while the shingle itself is still in first class condition. A Redwood shingled roof, laid with the right kind of nails, will give satisfactory service from 30 to 50 years.

The Redwood shake is a 36-in. long shingle, 6 in. wide, and ¼-in. uniform thickness. For best service on roofs, one-third to one-quarter pitch, they may be laid 24 in. to the weather, which means an overlap of 12 in. When the roof is more than one-quarter pitch, a 6-in. overlap, which gives a 30-in. weather exposure, will

RESIDENCE, CHETEK, WIS.
Clear Redwood siding, natural oil finish

RESIDENCE, CHETEK, WIS.
Clear Redwood siding, natural oil finish

RESIDENCE, OAKLAND, CAL.
Redwood shakes, natural finish

RESIDENCE, HIGHLAND PARK, ILL.
Redwood Eastern Bungalow shingles painted white

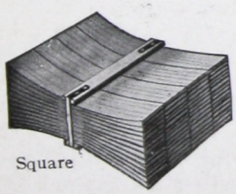
suffice, although a 12-in. overlap is recommended. There is no set rule for laying shakes to the weather, and the overlap can be varied to suit local conditions.

The Redwood shake, which may be either split or sawn, is ideal for everything from bungalow to barn.

In 1893 Redwood shingles were taken from the roof of General U. S. Grant's headquarters, at Fort Humboldt, California, where they had been for 40 years. The wood was absolutely sound and without a trace of rot, although the shingles were worn thin by wind-driven sand.

A typical example of Redwood shingle service is found in the following letter from A. Cottrell, Eureka, Cal.:

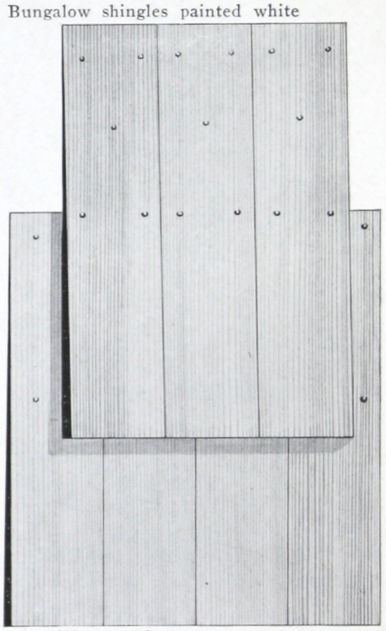
"In the winter of 1870 I shingled my house at Eureka with Redwood shingles. They were first painted about the year 1880, and again about 1895. The shingles were not removed from the roof of the house until September, 1913. They were in service 42 years, and, on being taken off the roof, were found to be in first-class condition."



Square

Redwood Shingles, either dimension or random widths will give longer service than any similar style of roof or side shingle.

The *natural* preservative in Redwood makes it unnecessary to stain or paint Redwood Shingles.

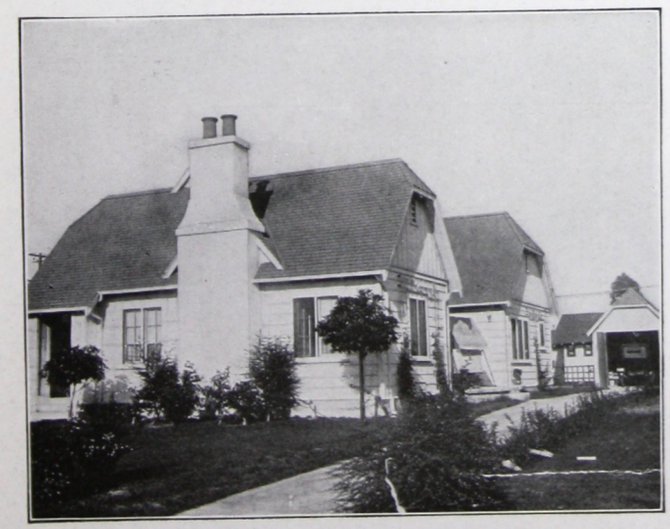


These new style sawn shingles are fast coming into use for the side walls of residences in the middle west and east.

They are either 24-in. or 26-in. long, as desired, both sizes being 5½-in. wide and are ¾-in. thick at the butt.

They are Clear Redwood, of the highest grade—and when laid 13-in. to the weather and painted white, give the appearance of wide clapboards as will be seen in the above illustration.

These shingles do not warp when in use—they take and hold paint indefinitely, and are recommended for high class residential work, where their ultimate economy will be proved by a practically unlimited period of service.

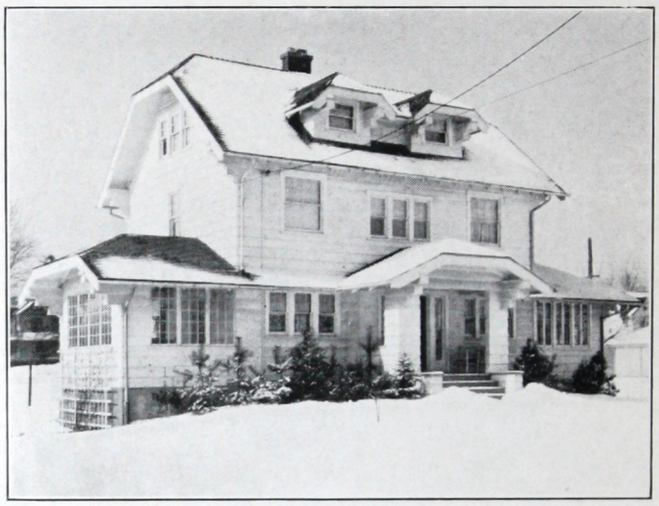


BUNGALOWS, LOS ANGELES, CAL.
Redwood siding painted white

RESIDENCE, INDIANAPOLIS, IND.
Redwood siding and shingles

California Redwood—The Western Wood For Eastern Homes

In mansion or bungalow—wherever you build—California Redwood used for exterior construction and finish provides unusual protection against climatic extremes and freedom from wood destructive elements.



Redwood Resists Rot

Every fibre of Redwood is impregnated during growth with a *natural* preservative which prevents the growth of decay-producing fungi. Properly seasoned, Redwood is practically immune from warping, shrinking and swelling. Climatic conditions and earth moisture do not weaken or rot Redwood.

The good appearance and soundness of your house are assured when you build with Redwood sidings, shingles, porch posts and columns, railings, roof boards, gutters, window and door frames—for these parts of the buildings are exposed to the weather, or in contact with the earth. For all these purposes Redwood is best.

In a Redwood house, repair and up-keep expenses are reduced to a minimum. Being unusually free from knots, splits, checks, and other imperfections, there is little waste in Redwood lumber. The builder's time is saved in working with Redwood. Having a close grain, smooth texture, and being free from resinous substances, Redwood takes and holds paint well.

California Redwood—The Western Wood For Eastern Homes

REDWOOD HOMES in the COUNTRY CLUB DISTRICT, Kansas City

Nowhere in the Middle West or East will be found a more beautiful residential section than in the Country Club District of Kansas City, Mo.

Here the J. C. Nichols Investment Company have built many homes of varied design, but all of excellent architectural style.

A few of these Redwood Homes in Missouri are here shown. The good appearance and long life of these Redwood houses is assured because they are invulnerable to weather and fungus destructive elements.

Redwood Millwork.

The fine soft texture of Redwood makes it a splendid wood for millwork of all kinds.

For contact with the ground, as mud sills and underpinning, or for exposure to the weather, as exterior trim, porch columns and flooring, porch rails, etc., there is no wood more durable than Redwood.

It is manufactured into all kinds of general millwork, such as frames for doors ad windows, mouldings, columns for interior and exterior, newels, balusters, rails, spindles, pickets, battens, trim and specialty products. Many are built-up on the linderman machine, with its dovetail glued joint—a joint that Redwood makes perfectly and because of its close grain the joint is barely discernible.

Redwood Window, Door and Cellar Frames.

Redwood sash, door and window frames, also cellar frames, are fast coming into use in all Eastern localities. Redwood should always be used for the portion of the frame that comes in contact with the weather, as well as the part covered when the frame is set into the building and which is likely to be reached by moisture or rain seeping behind the casing.

THE PACIFIC LUMBER COMPANY can make delivery on any of the standard sized window, door or cellar frames listed in the Standard Frame Catalog No. 922.

Shipments are made from either the mills at Scotia, California, or from the quick shipment depot in Chicago, where suitable stocks of seasoned Redwood lumber and millwork are always carried.

INFORMATION NECESSARY FOR ESTIMATES—To avoid errors and misunderstading, orders should state:

Window Frames—

(1) Number of frames wanted.
(2) Our catalogue style number.
(3) Size of sash opening—width first, height next.
(4) Thickness of sash.
(5) Glass size and number of lights.
(6) Whether frame is for plain or check rail sash.
(7) Whether pulley stiles bored for pulleys or not.
(8) Send sample pulley.
(9) Whether pockets are to be ripped only, or ripped and cut (and whether screwed in or not).
(10) All window frame sills beveled, ¾-in. to 6-in. rise.
(11) Thickness of pulley stile.
(12) Width of pulley stile.
(13) Any other information special to frames ordered.

Door Frames—

(1) Number of frames wanted.
(2) Whether inside (I.S.) or outside (O.S.) frames.
(3) Our catalogue style number.
(4) Size of door—width, height and thickness.
(5) Width and thickness of jambs.
(6) Whether plain or rabbeted jambs.
(7) Width of rabbet or size of stops.
(8) Whether sills are to be furnished by us or not.
(9) If without sills whether dadoed for sills or not.
(10) All door frame sills beveled, ¾-in. to 6-in. rise.

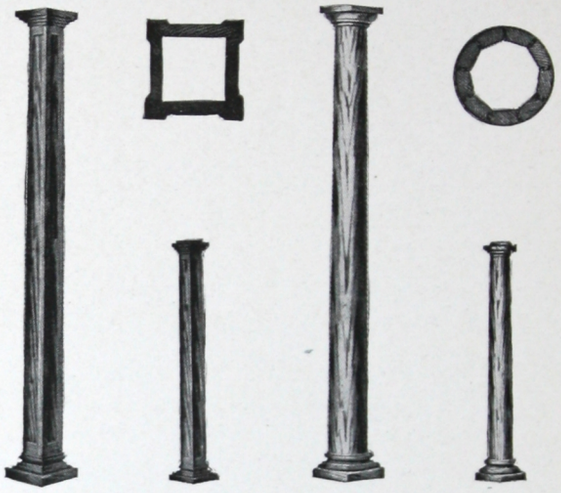
Cellar Frames—

(1) Number of frames wanted.
(2) Catalog number.
(3) Glass size.
(4) Size of opening.
(5) Size of rabbet or sash thickness.

Porch Columns and Pergolas.

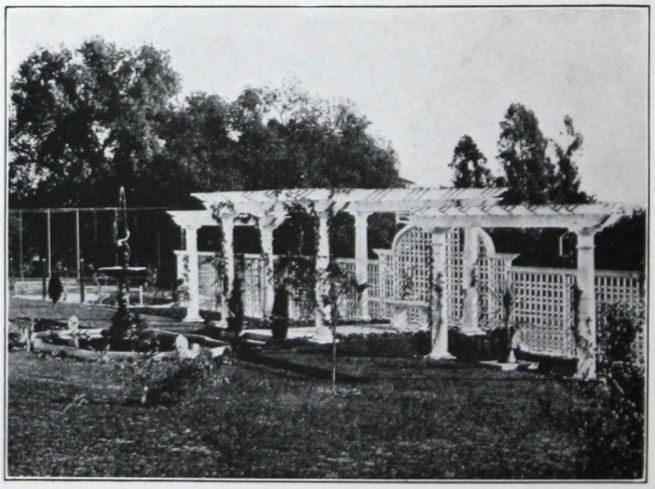
Redwood's resistance to rot and perfect adaptability to paint make it a most desirable and efficient wood for porch columns. THE PACIFIC LUMBER COMPANY has met the large demand for Redwood porch columns by manufacturing them in sufficient quantity at their mills so as to be able to supply standard sizes of columns and newels, in any reasonable number, immediately from stock.

Redwood columns are built of staves properly dried, and there is no shrink, warp, or swell to throw them out of alignment. Redwood's perfect adaptability to paint also contributes to the reasons why it is the best wood for a pergola.



PORCH COLUMNS

Like the sleeping porch, the pergola, because of its being outdoors, should be built entirely of Redwood—of Redwood columns, girders, flooring, rafters and lattice. Then there will be no rot due to contact with the ground or exposure to weather.



REDWOOD PERGOLA
Columns, beams, girders and lattice work of Redwood painted white

Sleeping Porches and Greenhouses.

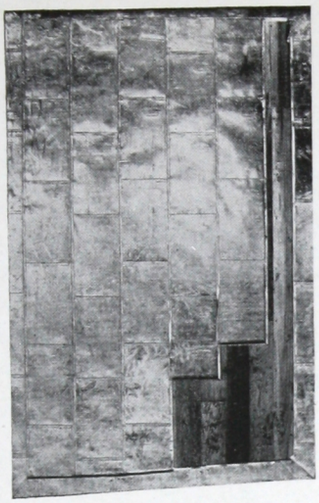
Redwood should be used in building the sleeping porch because of its splendid weathering qualities—in fact, the nature of the wood is perfectly adapted to this usage.

A sleeping porch is an economy in the reduction of doctor bills, and a Redwood sleeping porch is an actual saving in the long run. It should be built entirely of Redwood.

No better lumber exists for use in greenhouse construction. It is not affected by the wet earth in the benches, nor by the difference in temperature between the outside and inside atmosphere. Constant repairs, due to decay, warping and twisting, are avoided.

Redwood Fire Door Cores.

Redwood is one of the four woods specified by the Fire Underwriters Laboratories as a material from which fire door cores should be built.



FIREPROOF DOOR SHOWING REDWOOD CORE
Approved by the Fire Underwriters' Association

Of these four woods Redwood is the first preferred, for these reasons:

(1) Natural resistance to fire because of slow ignition and slow burning.

(2) Absence of pitch, resin, or other inflammable elements.

(3) Does not dry rot when denied ventilation.

(4) Will not "wet" rot due to moisture from sweating metal.

(5) Light in weight, strong and easy to work.

(6) Always hangs true, and is not affected by swelling or shrinking in the core by reason of moisture or dampness that might penetrate through steaming, sweating, etc.

In the State Housing Act of California, Redwood only is specified as a wooden fire resisting material for fire doors.

The following from Sections Nos. 58 and 59 of the Act effective September 1st, 1921:

"In every tenement house or hotel hereafter erected, every boiler used for purposes of heating the building, using fuel other than gas, and every heating furnace or water heating apparatus, *using oil or other fluid fuel,* shall be installed in a room.

"Any door in the wall of such rooms, shall be a fire resisting door, constructed of three thicknesses of ⅞ in. by not more than 6 in., tongued and grooved, matched *redwood boards* entirely covered on the sides and edges with lock-jointed tin; every such door shall be self-closing, so hung as to overlap the walls of the room at least 3 in., and any glass in any such door or any glass in any window or opening in the walls of a boiler room shall be wired glass, not less than ¼ in. thick, set in a metal or metal covered sash."

The following letter from a large Pacific Coast manufacturer of fire doors is based on years of practical experience:

Los Angeles, Cal.,
Aug. 16, 1916.

Gentlemen:

In reply to your letter of August 15th.

There has been much discussion on the relative merits of various soft woods to be used in construction of fire doors.

In my experience I find that Redwood is the best wood in all cases, it having, you might say, no pitch in it, which makes it almost non-burnable. Also, it does not dry-rot when enclosed by metal and denied ventilation.

Most woods I have noticed that are encased in metal will sooner or later dry-rot, and I have noticed a number of doors after having been enclosed for seven or eight years were reduced to scrap or junk through dry-rot.

We are the largest manufacturers of fire doors on the coast, and we have never had one complaint about our material going bad. In fact, in the course of a change in one of the Pacific Telephone Buildings in San Francisco, the engineer in charge cut one of the metal doors in two that we manufactured, the door in mention having been in place about eight years; and he, the engineer, returned a part of the door to us, and a letter stating that the door was in just as good condition as the day we manufactured it.

Also, another thing that I noticed on the Redwood doors is that after they have been subjected to a fire they are not burned up. I could cite a number of incidents, but I remember one in particular in which I went to examine the doors after a fire. I found that the door next to the fire had been charred possibly one-quarter of an inch deep. The fire did not get in any further; in fact it stopped, and as I said, this is due to the fact that there is no pitch in the wood to help it burn.

After the fire at the Times Mirror Company's plant (The Los Angeles Daily Times explosion), I noticed on the building across the alley there was a shutter protecting a window opening. Considering the great heat from the explosion and fire, the shutter had fulfilled its duty much more so than any other protection used on the adjoining window. In fact, some of them had hollow metal windows, and frames, and they had gone absolutely to pieces, but this Redwood shutter kept the fire out of this particular opening; and without doubt in my mind if they had been used on the adjoining openings they would have saved that building.

In conclusion, you can see where I stand regarding the use of Redwood. We will not use anything else because I deem it that our customers are entitled to the best and it is up to us to see that they get it.

Yours very truly,

California Fire Proof Door Co.,

(Signed) Mgr. J. A. Mottashed.

Redwood Fire Walls.

Redwood's slow ignition, slow burning, and the ease with which fire is extinguished have made it the recognized material for fire walls.

Experience on the Pacific Coast has demonstrated that a solid Redwood fire wall will perform its functions satisfactorily.

In the State Housing Act of California, effective September 1st, 1921, Redwood is specified as the only wood allowed for fire walls and ceilings. A portion of the Act reads as follows:

"In every tenement house or hotel hereafter erected any portion of such building, in which there is kept or stored any automobile or automobiles, shall be a room, the enclosing partitions of which shall be built of concrete, reinforced concrete, brick, stone, concrete tile or blocks, or terra cotta tile, not less than 6 in. thick or may be of wood studs lined on the automobile storage room side with *Redwood Boards* not less than ⅞ in. thick covered with asbestos paper ⅛ in. thick, and then covered with No. 26 (gage) galvanized iron, or such enclosing partitions may be constructed of studs lathed on both sides with metal lath and plastered with portland cement plaster not less than ¾ in. thick. Such enclosing partitions shall extend from the floor of the room to the ceiling of the same. The entire ceiling of such room shall be built of material or materials *similar to that used in the construction of its walls,* or shall be lathed with metal lath and be well plastered not less than ¾ in. thick. The floor of every such room shall be of concrete not less than 2 in. thick.

"Every door, window or other opening in the walls of buildings included within the district above described, shall be protected in the same manner as required by this act for doors, windows and other openings in a boiler room."

Building ordinance No. 399, of the city of Eureka, California, is typical of the permitted use of Redwood for fire wall purposes, and reads as follows:

"Sec. 2. The exterior walls and all party walls of the buildings included within the district above described, shall be constructed of concrete or brick, natural or artificial stone, or iron or a combination of any or all of the above described materials, or of Redwood as provided by this ordinance.

"Sec. 3. The height of all wooden buildings hereafter constructed within the fire limits shall be limited to 50 feet, from the sidewalk grade to top of fire wall or peak of roof.

"Sec. 4. All wooden buildings hereafter erected within the fire limits of the city of Eureka, except those built for, and used exclusively as dwelling houses, outhouses, and private

stables, shall be constructed with solid walls, the same to be not less than four inches thick in all one and two story buildings, and in all three or more story buildings, the two upper stories shall be constructed with solid walls of like thickness, and the lower story or stories shall be constructed with solid walls not less than six inches thick. The above thickness of walls to be exclusive of plaster, weather boarding or rustic."

OAKLAND, CALIFORNIA,
April 11, 1917.

GENTLEMEN:

With reference to your communication of the 7th inst., would advise you we have selected Redwood in many parts of our new building on account of the resistance this lumber has to decay and deterioration, and also on account of its resistance to fire. We particularly selected Redwood for our elevator shaft on account of the well-known resistance of this wood to fire. The construction of our shaft is 2 x 6" Redwood timbers placed on top of each other, making a solid wall of 6" thick.

We gladly recommend this lumber to anyone desiring slow burning construction.

Yours very truly,

CALIFORNIA COTTON MILLS CO.,
Mgr. J. R. Millar.

Redwood for Roofs.

Redwood possesses a number of qualities that make it highly preferable for roofs, and particularly in factories where there is humidity and condensation to contend with. It has been found particularly serviceable in connection with the so-called "sawtooth" type of roof.

In many kinds of business such as textile mills, paper mills, etc., where there is humidity or rising steam, there is trouble with condensation that drops back on to the products handled, and creates a manufacturing loss. This is due to the fact that the roofing materials do not properly insulate the sharp differences in temperature between the exterior and interior, and particularly where there is severe cold weather.

A 4-ACRE ROOF REPAIRED WITH CALIFORNIA REDWOOD
Part of roof of textile mill, New Bedford, Mass.

It is not necessary to subject Redwood to artificial preservatives to protect it from rot and decay—it possesses a *natural* preservative that resists rot both in contact with water, moisture or humidity, or subjected to variable conditions of heat or dryness, or severe alternating dry and moist conditions. Redwood can be denied ventilation by sealing in metal, and under conditions of this kind it has a high resistance to dry rot; this same resistance to dry rot is present even if the wood is not denied air.

In Redwood, as in other woods, the heart stock will last longer than the sap. There is a sharp distinction between heart and sap in Redwood, as the natural color of the heart wood is a soft reddish brown, while the sap wood is cream color. Redwood sap wood, however, is as durable as any other soft wood when painted.

Redwood's natural resistance to decay under moisture or humidity gives it a maximum of life, while its inherent resistance to the attack of acids or alkalis, or the fumes of chemicals, makes it preferable in cases where such conditions prevail.

It is light in weight, and sufficiently strong under proper design.

Redwood also possesses the necessary attribute of holding its shape—when wet it does not swell and, when again dried, does not shrink perceptibly. Redwood is not sensitive to severe changes of temperature or atmospheric conditions which set up counteracting strains in wood. It can be depended on to hold its shape when

REPAIRING 4-ACRE SAWTOOTH ROOF WITH REDWOOD
A closer view of the preceding illustration

one side is subjected to freezing and the other to heat or humidity.

Redwood is a thoroughly satisfactory surface to paint. Its surface affords a firm grip for the paint and makes it possible to get a thorough coverage. As Redwood, when thoroughly dry, is subject to a minimum of movement in the wood itself under varying conditions of heat or moisture, there is a minimum tendency to check the paint film from such cause.

Where Proper Insulation and Resistance to Decay are Particularly Valuable.

F. J. Hoxie, Engineer and Special Inspector of the Associated Mutual Factory Fire Insurance Companies, Boston, Massachusetts, writes regarding this work:

"I am well aware of the excellent rot resisting qualities of California Redwood, also of its high insulating power. I believe there is an excellent field for Redwood for roofs, especially in paper mills, weave mills and other finishing mills."

The peculiar and uniform cellular structure of Redwood accounts for its insulating qualities, while the *natural* preservative prevents the formation or growth of decay producing fungi in Redwood lumber.

Redwood Tanks and Vats.

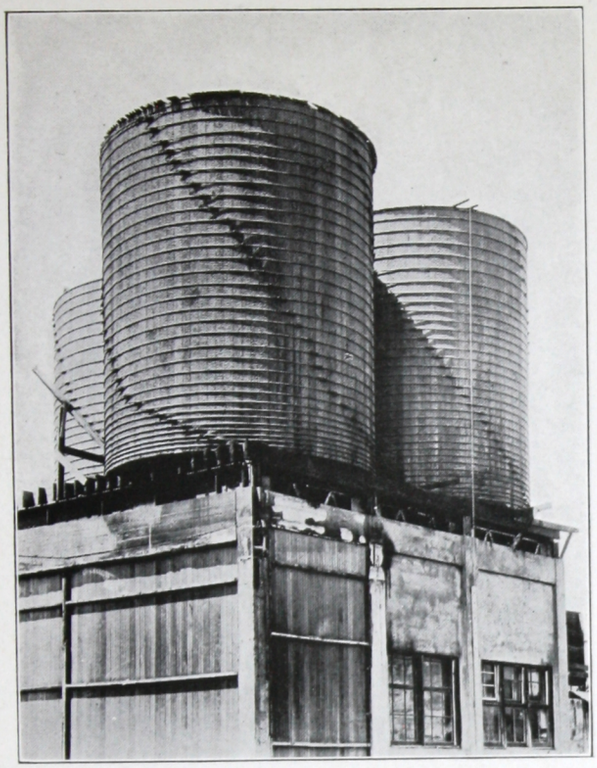
Redwood makes a superior stave for tanks.

Redwood is a non-conductor of heat and cold; 2 in. of Redwood is equivalent in insulating power to approximately 30 in. of steel or concrete. This is an element of high importance in the stave for this use because it preserves the temperature of the contents of the tank.

Redwood staves are made from clear heart straight-grain stock, and come in standard sets of 6 to 9 ft. and 10 to 20 ft. in length.

Redwood's long life and resistance to decay or corrosive acids and alkalis make it extremely valuable for tanks. Redwood tanks can handle muriatic acid solutions up to 6%, and up to 28% of nitrohydrochloric acid.

Redwood tanks are in general use for water storage and fire protection in all types of buildings, railroads, etc.



REDWOOD TANKS AFTER WITHSTANDING SEVERE FIRES

The two tanks in the foreground are of Redwood and were simply charred by the fire. The tank in the rear is a new tank made necessary because the old one which was of another wood was destroyed by the fire

Redwood Tanks Are a Sound Investment.

Utility, service and cost are the three considerations that should determine water tank specifications.

In first cost some tanks—both wood and metal—are slightly cheaper than Redwood tanks. But judged by the term of service, and cost for upkeep, Redwood tanks are better and cheaper. Hoops may rust out and be repeatedly renewed while Redwood endures. Repair or replacement costs are minimized whether the service be 10 years or 30 years.

Water does not rot Redwood. Fungus does not attack it. No protective treatment is required because Redwood is impregnated during growth with the *natural* preservative which remains in the fiber during the life of the tank.

Redwood is odorless and tasteless. It is unaffected by acids, alkalies or oils. Redwood tanks, pipes and vats are in continual use for supplying cities and institutions with water, tanning leather, dyeing textiles and for the strong solutions used in the leaching of copper. In all climates of the world Redwood tanks have been used for years, giving exceptional service.

A permanent tank is assured by the use of Redwood, one that neither rusts or rots, that remains tight and sound indefinitely, that does not affect the tanks contents and is not affected by them.

A 15,000-GAL. REDWOOD TANK FOR SPRINKLER SYSTEM SERVICE

Erected on the roof of one of Pittsburgh's large department stores

A 30,000-GAL. WATER TANK OF 3-IN. REDWOOD

Installed at the Pittsburgh Field Club for club water system, watering the greens and supplying water for swimming pool.

Lattice Roof Trusses.

The wood lattice roof has been designed to meet the modern demand in industrial building for a light roof truss which can be built easily, quickly and at a low cost. The design is of such a nature that the truss can be built to span all ordinary lengths between walls without the need of intermediate supports, thus providing clear floor space in the building. Although light in weight it must be strong and constructed of material which can be obtained without delay.

Redwood's long life, resistance to fire, decay, and to corrosive acids make a Redwood lattice truss extremely suitable in construction where fire hazard, acid fumes, excessive moisture, or a combination of heat and humidity are present.

96-FT. REDWOOD LATTICE TRUSSES BEING ERECTED

Roof boards, also of Redwood, fastened directly to trusses

Insulating Qualities of Redwood Ideal for Cold Storage Requirements.

Redwood cellular structure when studied under a microscope, looks very similar to a comb of honey between the dark annular rings. Every one of these millions of cells in the growing tree is full of sap, but when the tree is cut into lumber, the lumber must be "seasoned" or dried, before it goes into commercial use. This "seasoning" process consists merely of evaporating the natural moisture of these cells. Each cell, therefore, becomes a dead air space.

The cellular make-up of Redwood is uniform both in the thickness of the cell wall as well as the size of the cell. It is plainly evident, therefore, that heat applied to one side of a piece of Redwood, to travel through the Redwood must pass through a thin cell wall and then another dead air space, and so on. Heat passing through this combination rapidly dissipates.

Prof. L. J. Towne, of Columbia University, gives the relative power of conduction of 1 to 20 between wood and stone, cement or clay products. This means that stone and cement are 20 times a better medium for the conduction of heat or cold than is wood. The millions of dead air cells between the annular rings of Redwood are what give Redwood its insulating power.

A large manufacturer of silos in the east, one of the pioneer concerns in the use of Redwood for silos, makes the statement that 2 in. of Redwood is equivalent to 30 in. of concrete in insulating power. This manufacturer has studied Redwood thoroughly from this angle for the reason that the success of a silo depends upon the non-conductivity of the silo wall—as dissipation of the natural heat of the silage through the silo wall increases the per cent of waste silage.

Installations of Redwood Insulation in Cold Storage Plants.

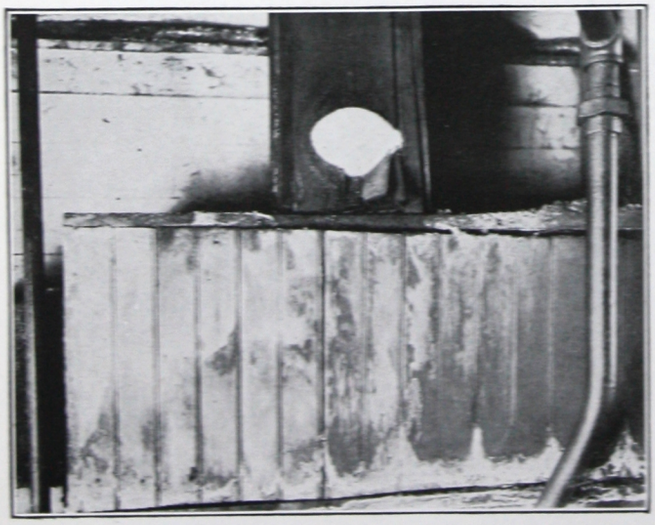
Manufacturing plants use Redwood as a substitute for corkboard for insulating.

There are some splendid examples of Redwood's insulating power, as well as its remarkable longevity under the most severe service in the old plant of the National Ice & Cold Storage Co., San Francisco. This plant was built in 1902 and Redwood was used throughout. The system of brine casing is incased in Redwood boxes made of 1-in. matched and surfaced Redwood. Nearly all of these insulation boxes are still in use. The temperature in the brine pipes is 6° above zero, and they have gradually built up around the pipe, inside of the box, an incrustation of frost that completely fills the box. In spite of the fact that the temperature of the inside of these insulation boxes is 6° above zero, and the temperature in the engine room of the plant is 80°, there is no shrink, warp, swell, twist nor check in these boxes, nor is there any gathering of frost on the outside of the box which would indicate free conductivity through the wood.

REDWOOD ICE STORAGE ROOM AFTER 15 YEARS' SERVICE

In plant of National Ice & Cold Storage Co., San Francisco. In spite of severe conditions of service, this room is still airtight, and there has been no decay in planking or timbers

Not only this plant, but most of the icehouses on the Pacific Coast use Redwood as lining for cold storage and ice rooms. In the plant above referred to there are ice storage rooms that have been in continuous use for 15 years, and where Redwood has been incased with frost and ice for that period, and in spite of this severe service these rooms are thoroughly airtight—the joints of the wood are tight.

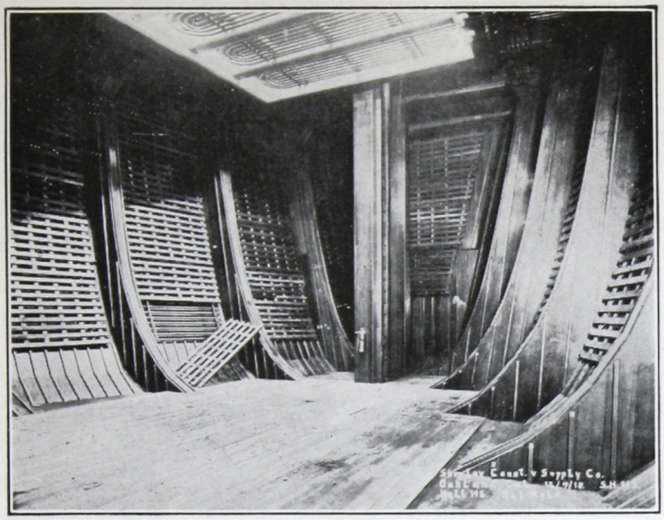


INSULATING BOXES OF MATCHED 1-IN. REDWOOD AROUND BRINE PIPES

15 years old. Engine room temperature, 80°; inside of box, 5°. Frost formed around pipes is gradually forcing box out of shape, but there has been no decay, warp nor check in the wood. Insulating qualities shown by absence of frost on exterior of box

Redwood Insulation in Refrigerator Vessels.

During the war the Shipley Construction Co. of Brooklyn, New York, fitted out on the Pacific Coast, for the Government, eight refrigerator vessels, each of approximately 10,000 tons dead weight capacity. The holds of these vessels were no more or less than immense Redwood refrigerator rooms and a number of the vessels, owing to disturbances in the Panama Canal, were forced, in order to get to the Eastern Coast, to go through the Straights of Magellan. This necessitated their passing the equator both south and north bound, and they were utilized in their trip east for carrying machinery, so that they were not frozen down until they reached the East Coast. Without any repairs whatever, the refrigerating machinery was then started, and the interiors of the vessels brought to a freezing point. When the machinery was shut off, the 7/8-in. Redwood insulation was sufficient to maintain the temperature with less than 1° of loss in 24 hours. Had the heat of the tropics disturbed the placement of the Redwood in any way, of course it would have been impossible to maintain this temperature.



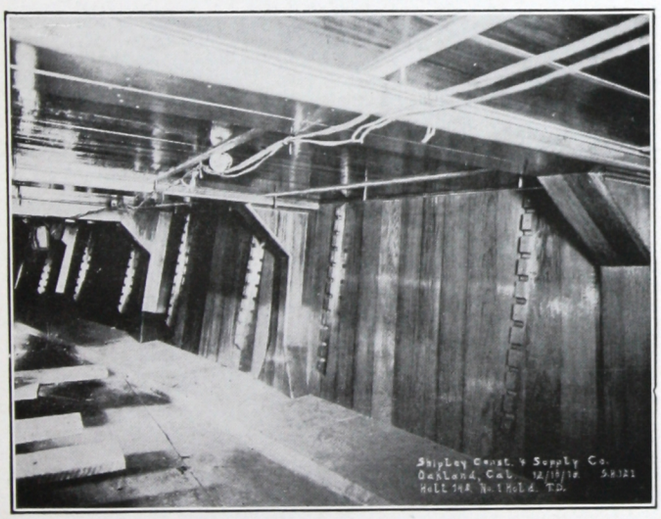
HOLD OF REFRIGERATOR SHIP
Showing Redwood insulation, ⅞ in. thick

The following are quotations from a letter recently written us by the shipbuilders:

BROOKLYN, N. Y.

Referring to your request for our opinion relative to the use of California Redwood in the insulation of refrigerated meat vessels.

We have pleasure in stating that we have used this wood exclusively for the insulation of eight large meat carrying steamers, having an aggregated capacity of over 2,500,000 cubic feet of insulated space.



HOLD OF REFRIGERATOR SHIP USED IN EQUATORIAL WATERS

A 24-hour stoppage of refrigeration resulted in a rise of only 1°. Redwood insulation prevents any damage being done to goods in storage as a result of temporary breakdowns of the refrigerating machinery.

RODD REDWOOD BLOCK FLOOR
in the new plant of the Fisher Body Corporation, Detroit, Michigan. Total area, 50,000 square yards. Installed by The Rodd Co., Pittsburgh, Pa.

These vessels carry frozen beef cargoes at temperatures below 15° F. and have been in service for periods varying between twenty-one months and twelve months, chiefly sailing between South American and European ports and North American and European ports. The vessels have been operated by the United States Navy and the United States Shipping Board.

The Redwood has proved entirely satisfactory for the purpose, and we do not hesitate in saying that where we can procure it in quantities sufficient for the purpose, we would prefer to use it instead of ——— or timbers usually obtainable in these parts. The wood lends itself to being economically worked and, as it does not check, the amount of loss incurred by waste is very small in comparison with the commercial grades of ———.

Redwood is quite sufficiently hard for the purpose, even when fitted on the wearing surfaces of insulated decks. However, in these positions under the hatchways it must be protected by an upper layer of harder wearing lumber, such as ——— or ———. This also applies to ———, ———, or any other lumber used for insulating, so that California Redwood is not at any disadvantage in this respect.

The absence from checking has proved a great advantage, inasmuch as it enables side and overhead insulation to be contained by one thickness of board without the use of paper. With commercial ——— it is necessary to use double boards with paper in between, so that the insulation filling will not sift out through checks which almost invariably appear in the boards, due to the wet and dry conditions experienced in insulated steamers between voyages carrying refrigerated cargoes and general cargoes respectively.

At least one of the steamers fitted with Redwood was very badly damaged in one of her insulated compartments by contact with a floating mine, resulting in flooding the entire compartment. After the vessel had been dry docked and dried out, the Redwood was found to be in no way damaged by immersion in sea water.

Very truly yours,

SHIPLEY CONSTRUCTION & SUPPLY CO.,
Per L. Williams,
Marine Department.

Railroad Stations and Track Side Structures.

Redwood is splendidly adapted for track side structure because it is sufficiently strong, light in weight, does not shrink, swell or warp, is hard to set on fire and burns very slowly, is not subject to wet or dry rot, and takes and holds paint perfectly.

The absence of shrink or swell is particularly desirable for roofing because of the varying climatic conditions.

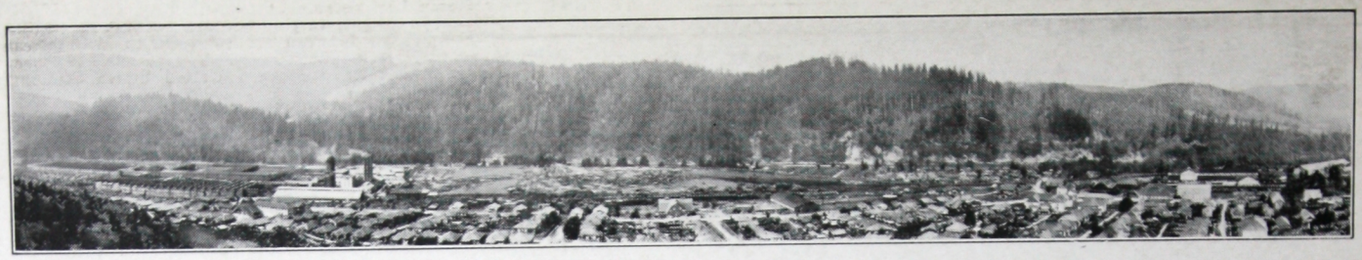
Redwood is generally specified for railroad stations in the western country because of its extreme durability in contact with the ground and exposure to the weather, its satisfactory painting surface, and its fire resistance. Redwood is specified for such work to reduce the upkeep cost on small stations.

Rodd Redwood Block Floors

Floors of Redwood blocks are light in color and add to the brightness and attractiveness of any room where they are used. They are also smooth, noiseless, resilient and extremely durable. Due to the *natural* preservative found in Redwood, they require no preservative treatment. Under conditions of extreme dryness or moisture, Redwood floors do not warp or buckle—they stay flat and tight, and will stand the hardest sort of service indefinitely. Being absolutely odorless, floors of Redwood blocks can be used in many industries, such as food manufacturing plants, canning factories, dairies, etc., where treated blocks that give off an odor could not be considered.

For use in private residences, Redwood blocks can be sanded down and given a highly polished finish, making a floor of unusual beauty and durability.

Installations of Redwood blocks, manufactured by THE PACIFIC LUMBER COMPANY, are handled by their Eastern contract engineers, THE RODD COMPANY, Pittsburgh, Pa., who are prepared to furnish specifications and quote prices on all types of Redwood block floors.



The Pacific Lumber Company's Mills, Yards and Employees' Homes in the Town of Scotia, California—The Home of Redwood

If You Should Go to California—

WE WOULD like you to go up to Humboldt County—into the heart of the Redwood region. You could hardly fail to be inspired by the rugged grandeur of the magnificent Redwood Forests; and you would be truly interested, we believe, to get a glimpse of the great industry by which this beautiful and romantic timber is turned into lumber for so many practical purposes.

Two Kinds of Redwood

You would soon learn that the Redwood used for commercial lumber is not the Sequoia Gigantea—the famous "Big Trees" in the National Parks of the Sierra Nevadas—but is a different species, the Sequoia Sempervirens (Everliving), which grows in ample commercial quantities along the northern coast of California.

Scotia—The Home of Redwood

In the heart of Humboldt County you would find the town of Scotia, where The Pacific Lumber Company's big mills are located, and where the population of 3,500 is made up almost exclusively of Company employees and their families. To these mills, producing half a million feet of lumber every eight hours, the giant Redwood logs are transported on the Company's own logging trains, after the trees have been felled, cross-cut and peeled by the Company's woodsmen. The mills and yards are equipped with a complete system of electrically operated overhead monorails and cranes, sorting tables, and other mechanical devices, so that every log and every piece of lumber is handled in the most efficient and economical way.

Efficient Production Aided By Wholesome Living Conditions

In its man-power, also, you would find Scotia well equipped. By means of its model logging camps with toilets and showers, clean sleeping quarters, neat kitchens, serving excellent food in comfortable dining rooms, by its pleasant cottage homes, its Men's Club, Community Theatre, and Recreation Center, The Pacific Lumber Company has attracted to its mills the most substantial type of lumber workers. These facilities, both human and mechanical, are of direct advantage to our patrons.

Properties of Redwood

A *natural* preservative which permeates Redwood accounts alike for the great age of the timber (Redwood trees are the oldest living things) and for the lumber's remarkable resistance to decay. A Redwood log buried in the ground for 600 years was found to be still sound and was actually cut into first-class lumber.

Containing, as it does, no pitch or other resinous substance, Redwood is slow to ignite, and its resistance to fire (as demonstrated in the San Francisco conflagration of 1906) adapts it to many commercial purposes.

These properties of rot and fire resistance, minimum warp and shrinkage, lack of odor, close grain and easy working texture have created a wide demand for Redwood for many industrial uses and for the manufacture of wood specialties, like caskets, incubators, silos, tanks, vats, pipes and flumes, cigar and candy boxes, chests, furniture cores, storage battery separators, fire-door cores, and many forms of railroad construction and maintenance.

The same characteristics adapt Redwood for many building purposes, such as siding, moulding, window frames, porch columns, balusters, interior and exterior finish, and shingles.

Conservation

Conservation is intelligent use. We are operating on that principle, not only in our logging, where waste is reduced to the minimum, but in our manufacturing, where, due to the completeness of our facilities and the demand for Redwood for such a wide range of uses, we are able to cut up and refine our lumber so as to utilize every part of the log, both high and low grades—even the sawdust and bark. This makes not only for conservation of timber, but for service and economy to our patrons.

Nation-Wide Service

As the demand for Redwood has increased, The Pacific Lumber Company has extended its distributing facilities, and is today prepared to serve lumber users in any section of the country. Pacific Coast business is handled through the Company's main office at San Francisco and a branch at Los Angeles. East of the Rockies trade is served by a subsidiary company: The Pacific Lumber Company of Illinois, having general sales offices at Chicago and New York. At Chicago is located a warehouse and quick-shipment depot for the convenience of customers who cannot wait for shipments from the Coast. Our offices are prepared to consult with any lumber user concerning his needs and to advise as to the suitability of Redwood and its economical use.

We shall be glad to give you full information and advice, without obligation on your part.

The Pacific Lumber Co.

Redwood

CHICAGO	NEW YORK	SAN FRANCISCO	LOS ANGELES
McCormick Bldg.	Pershing Square Bldg.	311 California St.	Central Bldg.

THE PACIFIC LUMBER CO. of Illinois — THE PACIFIC LUMBER CO.

The Pacific Lumber Company of Illinois Chicago—New York